



REVIEW

Exploring the Relationship Between Loneliness and Social Media Use Among University Students: A Comparative Review and Analysis

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Abstract

Loneliness among university students is a growing concern, influenced by the increasing integration of social media into their daily lives. This narrative literature review examines the intricate relationship between social media use and loneliness, synthesizing findings from global and Turkish research to provide a cross-cultural perspective. While social media platforms offer opportunities for connection, problematic or compulsive use, often driven by psychological factors such as Fear of Missing Out (FoMO), can exacerbate feelings of isolation and negatively impact mental health. The review highlights the multidimensional nature of loneliness, encompassing both emotional and social aspects, and examines key contributing factors, including self-esteem, social support, and academic stress. Gender and age differences further nuance these dynamics. Despite mixed findings, evidence suggests that the quality of social interactions, rather than the quantity of online engagement, critically affects loneliness outcomes. This review contributes to the literature by explicitly addressing research gaps, particularly the scarcity of cross-cultural comparisons, longitudinal analyses, and qualitative insights, and by outlining how these gaps can guide future studies to better understand causality and mediating factors. These findings emphasize the importance of tailored interventions in higher education settings to promote healthy digital behaviours and enhance students' psychological well-being in an increasingly connected world.

Keywords: Loneliness, social media, university students

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DERLEME

Üniversite Öğrencilerinde Yalnızlık ve Sosyal Medya Kullanımı Arasındaki İlişkinin İncelenmesi: Karşılaştırmalı Bir İnceleme ve Analiz

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Öz

Üniversite öğrencileri arasında giderek artan bir endişe kaynağı olan yalnızlık, sosyal medyanın günlük yaşama her geçen gün daha fazla entegre olmasından etkilenmektedir. Bu betimsel literatür taraması, sosyal medya kullanımı ile yalnızlık arasındaki karmaşık ilişkiyi incelemekte; küresel ve Türkiye odaklı araştırmalardan elde edilen bulguları sentezleyerek kültürlerarası bir bakış açısı sunmaktadır. Sosyal medya platformları bağlantı kurma fırsatları sunsa da, genellikle Kaçırma Korkusu (FoMO) gibi psikolojik faktörlerin tetiklediği problemli veya takıntılı kullanım, izolasyon hissini artırabilmekte ve ruh sağlığını olumsuz etkileyebilmektedir. Bu çalışma; yalnızlığın hem duygusal hem de sosyal boyutlarını kapsayan çok boyutlu doğasını vurgulamakta; özsaygı, sosyal destek ve akademik stres gibi temel belirleyici faktörleri incelemektedir. Cinsiyet ve yaş farklılıkları ise bu dinamiklere daha ayrıntılı bir boyut kazandırmaktadır. Literatürdeki karmaşık bulgulara rağmen veriler; yalnızlık üzerindeki asıl belirleyici unsurun çevrimiçi etkileşimin miktarından ziyade, bu etkileşimlerin niteliği olduğunu göstermektedir. Bu inceleme; özellikle kültürlerarası karşılaştırmaların, boylamsal analizlerin ve nitel çalışmaların eksikliği gibi literatürdeki boşluklara doğrudan değinerek; gelecekteki çalışmaların nedensellik ve aracı faktörleri anlamada nasıl bir yol izlemesi gerektiğine dair bir çerçeve sunmaktadır. Elde edilen bulgular, giderek daha bağlantılı hale gelen günümüz dünyasında, sağlıklı dijital davranışları teşvik etmek ve öğrencilerin psikolojik refahını artırmak amacıyla yükseköğretim ortamlarında kişiye özel müdahale programlarının önemini vurgulamaktadır.

Anahtar Kelimeler: Yalnızlık, sosyal medya, üniversite öğrencileri

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1. INTRODUCTION

Loneliness has become an increasingly significant concern among university students due to the unique social and academic challenges they face during this transitional period in their lives. Examining the relationship between loneliness and social media use is essential in the contemporary digital age, as social media platforms play a central role in the social lives and mental health of young adults. While social media has transformed the way students connect with each other, growing evidence indicates that excessive or maladaptive use can worsen feelings of loneliness and negatively impact mental health. Although the overall time spent on social media shows only a weak correlation with loneliness or psychological distress, problematic or compulsive use, particularly when it functions as a coping mechanism, has been strongly linked to increased levels of stress, depression, anxiety, and loneliness (Ghanayem et al., 2024; O'Brien et al., 2023; Wu et al., 2024).

Research across diverse cultural contexts consistently demonstrates a positive correlation between social media addiction and loneliness. Some findings suggest that this relationship may be bidirectional: loneliness can lead individuals to engage excessively with social media, and in turn, excessive use can intensify their sense of isolation (Bakry et al., 2022; Uyaroglu et al., 2022). For instance, studies in Türkiye indicate that social media addiction is linked to both social and emotional loneliness, particularly among vulnerable groups, such as males, single students, and those with lower perceived economic status, who may be at great risk (Çerkez & Kara, 2017; Uyaroglu et al., 2022). Gender-specific patterns also emerge: males frequently report higher loneliness levels, whereas females tend toward more intensive usage and higher Fear of Missing Out (FoMO) (Doktorová & Mghari, 2024; Rai & Gill, 2016). While online interactions provide certain conveniences, they cannot fully capture the depth and richness of face-to-face relationships. Ultimately, digital interactions cannot replace the depth of face-to-face relationships, and excessive screen time may compromise real-world connections and physical well-being (Halston et al., 2019; Ye & Ho, 2024). These findings highlight the importance of universities should provide targeted support and education to promote healthy social media use. They also emphasize the need for opportunities for students to engage in meaningful face-to-face interactions to sustain psychological and social well-being.

As social media becomes more integrated into students' daily routines, concerns regarding its psychological effects have grown. Therefore, this study aims to understand how different patterns of social media use, such as compulsive, passive, or emotionally driven engagement, are related to experiences of social and emotional loneliness. Additionally, the study also seeks to provide insights that can inform university-level interventions and digital well-being programs, especially by identifying vulnerable subgroups and usage behaviors that may heighten distress. Ultimately, this study seeks to contribute to a more nuanced understanding of how digital connectivity shapes students' real-life social and emotional health in the university context.

2. METHODOLOGY

This study employs a narrative literature review design to explore the relationship between social media use and loneliness among university students. Given the conceptual diversity, methodological heterogeneity, and cross-disciplinary nature of existing research, a narrative approach was considered more appropriate than systematic or meta-analytic designs. This format facilitates a broad, interpretive synthesis, emphasizing theoretical integration and critique over strict protocol-driven aggregation (Ahmad, 2025; Snyder, 2019; Sukhera, 2022). The topic spans psychology, education, public health, and communication studies, involving varied constructs such as Fear of Missing Out (FoMO), social media addiction, and emotional well-being, which are operationalized differently across cultural contexts.

To enhance comprehensiveness, a flexible search was conducted across databases including Web of Science, Scopus, ERIC, Google Scholar, Oxford Journals, and DergiPark. The strategy utilized Boolean combinations of keywords such as “university students,” “loneliness,” “social media,” and “mental health.” The review focuses on English and Turkish sources published between 2014 and 2024 to capture recent technological shifts and the impacts of the COVID-19 pandemic.

The initial search yielded varying results across platforms. In Scopus, the initial query for “university students” and “loneliness” yielded 562 documents, which was narrowed to 227 after filtering for “Psychology” and English/Turkish languages. Further refinement using “social media” and “mental health” resulted in 20 and 58 articles, respectively. The ERIC database provided 55 peer-reviewed hits, while Oxford Journals yielded 744. Google Scholar offered approximately 17,500 results, and DergiPark returned 18 region-specific studies for Türkiye. From this pool, 62 articles were identified as relevant through manual title and abstract screening. Subsequent “snowballing (reference tracking)” during in-depth reading led to a final selection of 71 articles. To ensure interpretive depth, all data extraction and thematic organization were performed manually without automated software or AI tools. Inclusion criteria required a focus on university populations and the relationship between social media use and loneliness or related constructs (e.g., self-esteem, FoMO). Empirical studies (quantitative, qualitative, or mixed-methods) from peer-reviewed journals, theses, and proceedings were included. Exclusion criteria focused on adolescents, clinical samples, editorials, and studies lacking theoretical foundations.

Data were organized thematically, focusing on study design, population characteristics, cultural context, and key variables. Extraction involved reflexive reading of abstracts and targeted full-text sections to ensure alignment with research questions. Using a structured manual spreadsheet, studies were categorized to identify recurring patterns, such as social media addiction, digital coping, and academic burnout, with specific emphasis on comparing Turkish and global findings. While no formal appraisal tool was used, an informal quality assessment ensured methodological and theoretical clarity. Contradictory findings were retained to provide a balanced synthesis. Despite its strengths, this narrative review faces limitations, including potential selection bias due to the lack of rigid systematic protocols and language bias from including only English and Turkish sources. Additionally, the prevalence of cross-sectional designs limits causal inferences. Nevertheless, the narrative

format facilitated a nuanced exploration of the psychosocial implications of social media use in university settings.

3. LITERATURE REVIEW

3.1 Theoretical Frameworks

Loneliness has been analyzed through various foundational psychological theories, each offering unique perspectives on its origins. Weiss's Theory of Loneliness is a primary model, differentiating between emotional loneliness, stemming from a lack of intimate bonds, and social loneliness, resulting from the absence of a broader network (Sobirjonova, 2024). Complementing this, Cognitive Discrepancy Theory suggests loneliness arises from the gap between desired and actual social relationships (Jean Tsang, 2019). Affective theories further emphasize the emotional distress caused by social disconnection and the inherent human need for meaningful belonging (McCarthy et al., 2025). Additionally, cognitive-behavioral models highlight how loneliness becomes chronic through negative self-perceptions, social anxiety, and excessive self-focus. These maladaptive patterns often create a self-reinforcing cycle that sustains feelings of isolation over time (Käll et al., 2020).

Attachment Theory also provides valuable insights, particularly in understanding loneliness among young adults who face significant life transitions (Nottage et al., 2022). It highlights how early relational experiences shape one's capacity to form and maintain close connections in adulthood. On the other hand, from a broader perspective, the Evolutionary Theory of loneliness (Cacioppo et al., 2014) views loneliness as an adaptive response, a psychological signal that motivates individuals to seek social contact (Cacioppo & Cacioppo, 2018). This evolutionary function has been crucial for human survival. Expanding on this idea, neurobiological perspectives claim that loneliness is linked to changes in brain systems related to attention, threat detection, and social information processing. Thus, they reinforce the role of loneliness as a biologically ingrained signal for social reconnection (Blandl & Eisenberger, 2025; Luo & Shao, 2023). Taken together, these theoretical approaches reveal that loneliness is a multidimensional phenomenon influenced by emotional, cognitive, developmental, and environmental factors. They collectively emphasize its complexity and the need for comprehensive, interdisciplinary approaches to understand and address it.

3.2 Global Perspective

The relationship between social media use and loneliness among university students remains complex and often paradoxical, shaped by psychological and demographic variables. Many studies report a positive correlation, suggesting that digital interactions often fail to replace real-life connections. For instance, Islam and Kumar (2019) found significant associations between Facebook use and loneliness in Bangladesh, while Ramadhan and Maryam (2024) reported a very strong correlation ($r = 0.922$) among Indonesian students, suggesting that limiting screen time may reduce isolation.

Similar patterns exist in Western contexts; Wright et al. (2018) linked increased usage to loneliness, poor sleep, and depression in the U.S. Likewise, Çerkez and Kara (2017) observed

a correlation between high usage and loneliness among Turkish students. However, other research challenges these linear findings. Doktorová and Mghari (2024) found no significant link between loneliness and social media or FoMO, despite high engagement levels. Similarly, Mohamed et al. (2023) noted that in Malaysia, perceived social support, rather than usage intensity, was the primary determinant of loneliness.

Perceived social support often acts as a mediator or moderator. Guo (2018) noted that while lonely individuals frequently use Facebook for socialization, having more friends correlates with lower loneliness, suggesting that the quality of connections is more critical than mere usage. Similarly, Ozsaker et al. (2015) found loneliness to be a predictor of problematic internet use, yet students with social media accounts reported lower problematic usage, indicating a potential compensatory role for digital platforms.

Gender differences remain inconsistent; while some studies show no variations (Doktorová & Mghari, 2024), others find female students more prone to depression, FoMO, and Instagram-related loneliness (Aslan & Polat, 2024; Rogowska & Libera, 2022). Furthermore, loneliness negatively impacts academic self-efficacy and social identity formation (Aslan & Polat, 2024; Brakespear & Cachia, 2021). Social media can simultaneously provide connection and trigger social comparisons that exacerbate inadequacy.

Overall, the global literature suggests a context-dependent relationship. Digital platforms may alleviate loneliness for those lacking offline support or increase isolation when usage becomes compulsive or comparison-focused. Evaluating student well-being thus requires considering mediating factors like FoMO, gender, and platform-specific behaviors.

3.3 Studies in Türkiye

Research in Türkiye consistently identifies a significant positive correlation between social media addiction and loneliness, though effects on academic self-efficacy and depression vary. Akcan et al. (2023) found significant associations between addiction, loneliness, and depression among vocational health students, recommending mandatory media literacy courses. Conversely, Et (2019) reported that social media use did not significantly impact introversion or loneliness among a smaller sample at Ufuk University, suggesting that these effects may depend on individual or contextual differences.

Focusing on medical students, Aygar et al. (2021) identified a clear link between social media use disorder and loneliness, emphasizing the need for further research on technology addiction. Similarly, Akyol Güner et al. (2022) found that moderate social media addiction negatively correlates with academic self-efficacy while increasing loneliness, illustrating its impact on students' academic confidence.

Gender dynamics also play a role; Karakuş and Tarhan (2023) observed that while female students spent significantly more time on social media, loneliness levels remained moderate and consistent across genders. Furthermore, Tiryaki (2018) discovered that lonely individuals often use social media as a coping mechanism or self-presentation strategy. Adding a mediating perspective, Kaya et al. (2023) confirmed that social media addiction mediates the relationship between academic burnout and loneliness. Collectively, these studies

underscore that Turkish students' digital behaviors are shaped by academic stress, gender, and specific coping motives, necessitating tailored institutional interventions. Üzgü et al. (2023) further investigated digital addiction and loneliness across three Turkish universities, finding that while women and younger students (18–21) exhibited higher digital addiction, loneliness levels remained consistent regardless of gender, age, or usage duration. This suggests that loneliness is influenced by factors beyond usage intensity. Collectively, Turkish research underscores a complex relationship; while social media addiction generally correlates with loneliness and lower academic efficacy, its direct effects on introversion remain ambiguous. Ultimately, students' digital behaviors are shaped by gender, academic stress, and self-presentation motives, necessitating tailored institutional interventions such as media literacy and mental health awareness programs.

A comparison of global and Turkish research reveals shared patterns and distinct differences. Globally, findings are often contradictory, with some studies emphasizing usage intensity and others highlighting mediating factors like the quality of social interactions or social comparison. For instance, in the U.S., Malaysia, and Indonesia, social interaction quality often outweighs usage duration in predicting loneliness. In contrast, Turkish studies frequently report a direct, positive association between social media addiction and loneliness, often linking these experiences to specific vulnerabilities like economic status and academic burnout. While global research focuses on cross-cultural patterns, Turkish literature offers a more contextualized approach, frequently providing institutional recommendations. In summary, although problematic use is a common risk factor, cultural and institutional variables critically shape how loneliness is experienced and addressed.

3.4 Understanding Loneliness

Loneliness is a subjective experience arising from the perceived gap between desired and actual social connections. Recently recognized as a major public health concern, it is linked to severe outcomes, including depression, anxiety, dementia, and premature mortality (Lim et al., 2020; Solmi et al., 2020). Beyond precipitating new mental health issues, loneliness often exacerbates existing conditions. Key predictors include the quality and quantity of social relationships—specifically marital status, living arrangements, and network structure—which often outweigh demographic factors like age and gender (Barjaková et al., 2023). Additionally, personality traits such as high neuroticism and low extraversion, alongside broader socioeconomic contexts, further shape this experience.

Beyond its psychosocial dimensions, loneliness involves significant biological alterations, including changes in brain structure, stress hormone levels, and immune activity (Lam et al., 2021; Quadt et al., 2020). These physiological shifts explain its profound impact on physical health. Furthermore, cognitive aspects influence how individuals perceive and engage with their social environment, ultimately reinforcing their sense of isolation (Motta, 2021; Roberts & Krueger, 2020).

Loneliness is not limited to any specific stage of life. It can affect individuals throughout their entire lifespan. While the COVID-19 pandemic intensified these feelings, the underlying drivers remain largely unchanged (Barjaková, 2023). Addressing loneliness is challenging due

to its multifaceted nature, requiring interventions tailored to unique individual circumstances. Effective strategies must prioritize social connections while addressing the psychological and biological factors involved (Campagne, 2019; Lim et al., 2020). Ultimately, recognizing loneliness as a multidimensional phenomenon—encompassing emotional, cognitive, and social aspects—allows for more targeted and effective prevention and intervention approaches.

3.5 Conceptualizing Loneliness

Loneliness and social isolation are interconnected yet conceptually distinct. While social isolation is an objective state characterized by limited social contact, loneliness is a subjective experience of emotional disconnection, independent of the actual amount of engagement. One can be socially isolated without feeling lonely, or feel lonely despite being surrounded by others. This distinction is crucial for health outcomes, as both factors uniquely influence well-being (Newall & Menec, 2019; Wolters et al., 2023).

Research indicates that social isolation is more closely linked to physical health risks, including dementia and premature mortality. In contrast, loneliness primarily correlates with psychological issues like depression and anxiety (Hong et al., 2023; Wang et al., 2023). Neurobiologically, these differences are reflected in distinct processes: loneliness involves negative perceptions of connectedness and changes in brain regions regulating motivation, whereas isolation can lead to structural brain changes and elevated stress hormones (Campagne, 2019; Vitale & Smith, 2022). Furthermore, social isolation is often driven by demographic or geographic factors, while loneliness is tied to individual psychological traits. Understanding these distinctions is essential for designing effective interventions; reducing isolation does not necessarily alleviate the subjective feeling of loneliness. Therefore, comprehensive strategies must address both objective and subjective dimensions to improve overall well-being.

3.6 Types of Loneliness

Loneliness is a multidimensional phenomenon, primarily categorized into emotional and social types. Emotional loneliness stems from a lack of intimate bonds, such as partners or close friends, while social loneliness arises from the absence of broader community networks (Van Den Bulck et al., 2025; Wolters et al., 2023). While both impact mental health, emotional loneliness is more strongly associated with depression and social anxiety, whereas social loneliness aligns more closely with social isolation.

Loneliness is also categorized by duration, which significantly influences its psychological and physiological effects. Transient loneliness refers to temporary feelings of disconnection often triggered by life transitions. In contrast, chronic loneliness is a long-standing condition carrying severe risks, including higher rates of depression and psychological distress (Martín-María et al., 2020; Wolska & Creaven, 2022). Furthermore, situational loneliness emerges from major life changes like relocation or loss; its persistence depends on whether the underlying situation is resolved. Unlike chronic loneliness, which decreases prosocial behavior, transient loneliness may serve an adaptive function by signaling individuals to seek social reconnection (Lee et al., 2022). Recognizing these distinctions in type, duration, and cause is vital for developing tailored interventions that effectively address an individual's specific needs.

3.7 Loneliness Among University Students

University students are particularly vulnerable to loneliness due to a mix of developmental, social, and contextual factors. The transition to university often requires leaving behind familiar surroundings, which disrupts existing social networks and may result in feelings of disconnection, especially for students who relocate to unfamiliar cities or live alone without an established sense of community (Hysing et al., 2020; Phillips et al., 2022). This phase of life also coincides with identity exploration because students engage in the complex process of redefining themselves and adapting to new social roles. This internal shift can increase self-awareness and social anxiety, thereby making it more difficult to initiate and sustain new relationships (Van Tonder et al., 2023; Phillips et al., 2022). In addition, academic requirements can intensify feelings of isolation. The pressure of success and heavy workloads often limits opportunities for social interaction. Thus, it results with stress, anxiety, and depressive symptoms, which have been closely linked to heightened experiences of loneliness (Simegn et al., 2023).

Relocation presents further challenges, particularly for international and first-generation students who may face cultural adaptation issues, language barriers, or uncertainty regarding their residency status. These factors are all associated with increased loneliness (Van Tonder et al., 2023). The COVID-19 pandemic further intensified these difficulties by disrupting daily routines, academic and living environment. It also drastically reduced face-to-face social opportunities, which restricted students' ability to form connections and navigate key developmental milestones (Phillips et al., 2022). Moreover, individual characteristics such as being younger, female, single, or having lower self-esteem and weaker communication skills are demographic factors that appear to increase vulnerability to loneliness within student populations (Hysing et al., 2020; Van Tonder et al., 2023). Taken together, the combination of major life transitions, evolving identity, academic pressure, and displacement creates a distinct vulnerability to loneliness among university students. This condition can carry meaningful consequences for both psychological well-being and academic success (Hysing et al., 2020; Phillips et al., 2022; Van Tonder et al., 2023).

3.8 Key Contributing Factors

Various factors contribute to heightened vulnerability to loneliness among university students. In particular, the most significant predictors are low self-esteem and limited interpersonal communication skills, both markedly increase the likelihood of experiencing loneliness (Van Tonder et al., 2023). Demographic characteristics also play a role in determining students' risk of experiencing loneliness. Students who are female, single, living alone, in their first year, the first in their family to attend university, or experiencing financial hardship are at greater risk of experiencing loneliness (Hysing et al., 2020; Zahedi et al., 2022). Psychological factors further heighten the risk of feelings of loneliness through elevated levels of perceived stress, sleep disturbances, and underlying mental health conditions such as depression and anxiety (Nazzal et al., 2020; Simegn et al., 2023; Wenig et al., 2023). In addition, students who perceive limited social support from family, friends, or romantic partners tend to be particularly vulnerable (Nazzal et al., 2020; Simegn et al., 2023). Cultural and environmental adjustments also influence loneliness, particularly for international students

or those with temporary residency. This may be because they face significant challenges in adapting to a new cultural or academic environment (Wenig et al., 2023). Other risk factors include experiences of sexual harassment and health-compromising behaviors, such as smoking (Simegn et al., 2023; Zahedi et al., 2022). Moreover, students transitioning from rural to urban settings, or those lacking access to social engagement opportunities, may find these changes to be a factor that heightens feelings of social disconnection (Ousman & Nazir, 2023). Taken together, these findings highlight the complex and multifaceted nature of loneliness among university students. Addressing this issue requires comprehensive and targeted interventions that enhance social integration, promote mental well-being, and provide meaningful support systems across diverse student populations.

4. RELATED CONSTRUCTS AND THEIR INTERACTIONS

4.1 *Fear of Missing Out (FoMO)*

Fear of Missing Out (FoMO) has emerged as a crucial psychological construct that helps explain the complex relationship between social media use and loneliness among university students. FoMO reflects the persistent anxiety that others might be having rewarding experiences without them. This fear drives users to remain constantly connected online through digital platforms. Ironically, this compulsive desire to stay updated and compare oneself to others often increase feelings of loneliness rather than reducing it. Doktorová & Mghari (2024) noted that female students reported higher social media engagement and FoMO. However, this did not necessarily reduce loneliness, suggesting that FoMO may mediate the relationship by increasing social comparison and emotional dissatisfaction. This paradoxical effect highlights how the pursuit of connection through social media, driven by FoMO, can deepen the sense of social isolation. It emphasizes the non-linear and context-dependent nature of these emotional outcomes.

4.2 *Psychological Well-being*

Loneliness and excessive social media use frequently interact with broader dimensions of psychological well-being, including anxiety, depression, and self-esteem. Several studies have demonstrated that increased social media engagement is linked to poorer mental health outcomes. For example, Wright et al. (2018) found that religious university students in the U.S. who used social media heavily reported higher loneliness, which in turn related to sleep disturbances and depression. Similarly, Akcan et al. (2023) identified positive associations between social media addiction, loneliness, and depression among health vocational students in Türkiye. These findings align with broader evidence that loneliness can erode academic self-efficacy and Life Satisfaction (Aslan & Polat, 2024; Rogowska & Libera, 2022), revealing how digital behaviors intertwine with emotional and functional well-being. Notably, social media can act both as a space for social connection and a trigger for negative social comparison, potentially undermining self-esteem and increasing vulnerability to mental health challenges.

4.3 Perceived Social Support

Perceived social support serves as a significant moderating factor in the complex interplay between social media use and loneliness. While digital platforms can provide meaningful social connections and emotional support, research suggests that the quality and perceived validity of these connections are essential. Guo (2018) emphasized that although lonely individuals tend to use Facebook more for socialization, having a greater number of Facebook friends correlated with reduced loneliness, implying that effective social support can buffer against feelings of isolation. Conversely, Mohamed et al. (2023) found that perceived social support, rather than social media use itself, was the key determinant of loneliness among Malaysian students. This dual role of social media, whether as a source of genuine support or as a mere illusion of connectedness, highlights the importance of how social interactions are experienced rather than simply their frequency or duration. Ozsaker et al. (2015) further illustrated this by showing that students with social media accounts exhibited less problematic internet use despite loneliness being a predictor against such problems, suggesting a compensatory role when social support is perceived as meaningful.

4.4 Academic Burnout and Self-Efficacy

The relationship between academic stress, burnout, and loneliness is mediated by social media addiction (Kaya et al., 2023). Loneliness may reduce students' academic self-efficacy and satisfaction (Aslan & Polat, 2024), indicating that emotional well-being and academic functioning are tightly linked and influenced by digital behaviors.

4.5 Gender and Age Differences

Gender emerges as an important moderator with mixed findings. Some studies report higher FoMO, depression, or loneliness related to social media among female students (Doktorová & Mghari, 2024; Rogowska & Libera, 2022), while others found no significant gender differences in loneliness (Doktorová & Mghari, 2024; Sharma, 2021). These inconsistent results suggest sociocultural and platform-specific behaviors influence how social media affects men and women differently. Age-related patterns further complicate the landscape. For instance, Üzgü et al. (2023) found that younger university students, particularly those aged 18–21, exhibit higher levels of digital addiction. However, their study did not identify significant age-based differences in loneliness levels. This suggests that while younger students may engage more intensively with digital technologies, the impact on loneliness is not necessarily linear. Instead, developmental factors and variations in digital habits may mediate the psychological consequences of social media use across different age groups within the student population.

5. RESEARCH GAP AND RATIONALE

Despite an expanding body of research investigating the relationship between social media use and loneliness among university students, several important gaps persist in the literature. One significant limitation is the lack of cross-cultural comparative studies that

examine how this relationship may differ across sociocultural contexts, such as Türkiye versus other global settings. Although global research provides valuable insights into patterns and psychological mechanisms, the extent to which these findings generalize across diverse sociocultural environments is still unclear. Turkish studies have begun to fill this gap, but direct comparisons with international data are limited.

Another key gap lies in the predominant reliance on cross-sectional research designs. A cross-sectional design is an observational study that analyzes data from a population at a single point in time, providing a 'snapshot' of associations rather than tracking changes over time (Baumeister et al., 2026; Wang & Cheng, 2020). These designs, while useful for identifying correlations, limit the ability to draw conclusions about causality or the directionality of effects. Consequently, it remains unclear whether increased social media use contributes to heightened loneliness, whether lonely individuals are more likely to seek out social media, or if these influences operate bidirectionally. Longitudinal studies, which track the same individuals over extended periods, are scarce but necessary to clarify whether these relationships are reciprocal over time (Baumeister et al., 2026; Wang & Cheng, 2020).

In addition, while constructs such as Fear of Missing Out (FoMO) and perceived social support have been identified as potentially important mediators or moderators, relatively few studies have systematically examined their roles within the broader social media-loneliness framework. Understanding these intervening variables is essential for unpacking the nuanced emotional and behavioral processes involved, as they may explain why social media use can simultaneously alleviate and exacerbate loneliness under different conditions.

Furthermore, the current literature is heavily weighted toward quantitative methodologies. While statistical analyses are crucial for identifying generalizable patterns, they may fail to capture the nuanced, subjective experiences of students navigating the interplay between social media and loneliness. Incorporating mixed methods approaches, particularly qualitative insights, could enrich understanding by capturing the complexities of personal motivations, contextual factors, and lived realities behind the statistical associations. A significant gap in the literature is the relative absence of qualitative studies exploring students' personal experiences of social media use and loneliness. Addressing this gap is essential for developing a holistic understanding of the phenomenon and designing interventions that resonate with students' lived realities. This study therefore highlights the importance of integrating qualitative approaches in future research.

In response to these gaps, the present study aims to contribute a more comprehensive understanding of how social media use relates to loneliness among university students. By situating the analysis within a Turkish context while drawing on global perspectives, the study seeks to elucidate under what conditions social media increases or decreases loneliness and how mediating constructs like FoMO and perceived social support influence this relationship. Ultimately, this research aspires to inform targeted interventions that enhance student well-being in an increasingly digital world.

6. IMPLICATIONS AND FUTURE DIRECTIONS

The findings of this review carry important implications for universities, mental health professionals, and policymakers. As the relationship between social media use and loneliness among university students is shaped by diverse psychological, social, and contextual factors, interventions must be multifaceted. Universities should prioritize digital literacy education, integrate mental health awareness into student orientation programs, and create accessible opportunities for face-to-face engagement and peer connection. Campus-based counseling services should be equipped to address issues related to social media addiction, the Fear of Missing Out (FoMO), and emotional well-being, especially among vulnerable student groups such as first-year, international, and economically disadvantaged students. Policymakers and educational institutions should also consider incorporating social media well-being strategies into national student mental health policies, encouraging responsible platform design, and funding longitudinal studies on student digital habits.

Future research should address the current reliance on cross-sectional and quantitative designs by incorporating longitudinal and mixed-method approaches. Studies exploring causal mechanisms and the temporal dynamics of loneliness and social media use would provide deeper insights. Additionally, further exploration of mediating and moderating variables such as FoMO, perceived social support, self-esteem, and cultural norms is needed. Comparative, cross-cultural studies would also enhance understanding of how different sociocultural environments influence the experience and expression of loneliness in the digital age.

7. CONCLUSION

This review emphasizes the complex and multidimensional relationship between social media use and loneliness among university students. While social media platforms provide important opportunities for connection, their role in reducing or intensifying loneliness depends on various factors, including patterns of use, individual psychological traits, and cultural contexts. Notably, problematic or compulsive social media engagement is consistently linked to heightened loneliness, depression, and diminished psychological well-being. Conversely, meaningful social interactions and perceived social support can mitigate these negative effects, highlighting the importance of quality over quantity in digital social connections. Furthermore, evidence from both global and Turkish studies reveals notable variations based on gender, age, academic pressure, and socio-economic background. These findings suggest that interventions must be tailored to address the diverse needs within student populations. At the same time, the predominance of cross-sectional research highlights the urgent need for longitudinal and mixed-methods studies. Such approaches are better suited to clarify causality and capture the nuanced lived experiences of students. Considering these insights, universities and policymakers should prioritize digital literacy, mental health resources, and opportunities for in-person social engagement to promote healthier social media use and reduce loneliness. Ultimately, future research and practice can better support students' emotional well-being in an increasingly digital world by advancing interdisciplinary and culturally sensitive approaches.

Conflict of Interest

There is no conflict of interest among the authors.

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Ethical Statement

Since this study is a review article, institutional review board (ethics committee) approval was not required. Throughout the preparation process of the study, scientific research and publication ethics rules (Higher Education Institutions Scientific Research and Publication Ethics Directive) were strictly followed.

Author Contributions

Thseen Nazir contributed 60% to the study, taking responsibility for the research design, literature review, writing, and editing. Şeymanur Önem contributed 40% to the study, participating in the literature review, data collection, and contributing to the writing process.

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Declaration of Generative AI Use

During the preparation of this work, the authors used generative AI for language and grammar editing as well as idea and draft generation.

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References

- Ahmad, M. (2025). Narrative literature reviews in scientific research: Pros and cons. *Jordan Journal of Agricultural Sciences*, 21(1). <https://doi.org/10.35516/jjas.v21i1.4143>.
- Akcan, K., Karakut, Ş., & Kabcıoğlu Bucak, F. (2023). Sağlık meslek yüksekokulu Öğrencilerinin sosyal medya bağımlılığının yalnızlık ve depresyon ile ilişkisi. *Genel Sağlık Bilimleri Dergisi*, 5(2), 178–189.
- Akyol Güner, T., Demir, İ., & Erdem, S. (2022). Üniversite öğrencilerinde sosyal medya bağımlılığı ile akademik öz yeterlik ve yalnızlık arasındaki ilişki ve etkileyen faktörler. *Yükseköğretim ve Bilim Dergisi*, 12(3), 508–518. <https://doi.org/10.5961/higheredusci.1139247>.
- Aslan, I., & Polat, H. (2024). Investigating social media addiction and impact of social media addiction, loneliness, depression, life satisfaction and problem-solving skills on academic self-efficacy and academic success among university students. *Frontiers in Public Health*, 12, 1359691. <https://doi.org/10.3389/fpubh.2024.1359691>.
- Aygar, H., Ünsal, A., Arslantas, D., Durak Aras, B., Işıktekin Atalay, B., Kılınç, A., Çam, C., Akbulut Zencirci, S., Adalı, S., Akman, A. Ö., Omari, M. H., Özdoğan, Ö. N., Püsküllü, A., Salkım, Ö., Şerbetci, M. N., Yalçın, A., & Yılmaz, A. E. (2022). Evaluation of social media disorder and loneliness levels of students in the first 3 years of the faculty of medicine. *Türk Tıp Öğrencileri Araştırma Dergisi*, 3(2), 16–24.
- Bakry, H., Almater, A., Alslami, D., Ajaj, H., Alsowayan, R., Almutairi, A., & Almoayad, F. (2022). Social media usage and loneliness among princess Nourah university medical students. *Middle East Current Psychiatry*, 29. <https://doi.org/10.1186/s43045-022-00217-w>.
- Barjaková, M., Garnero, A., & d'Hombres, B. (2023). Risk factors for loneliness: A literature review. *Social Science & Medicine*, 334, 116163. <https://doi.org/10.1016/j.socscimed.2023.116163>.
- Baumeister, S., Kocher, T., Papapanou, P., Holtfreter, B., & Demmer, R. (2026). Cross-sectional studies: Strengths, limitations, and methodological considerations. *Journal of Periodontal Research*. <https://doi.org/10.1111/jre.70063>.
- Blandl, F., & Eisenberger, N. (2025). The lonely brain: Aligning theories of loneliness with data from neuroimaging studies. *Annals of the New York Academy of Sciences*, 1547, 75–87. <https://doi.org/10.1111/nyas.15330>.
- Brakespear, G., & Cachia, M. (2021). Young adults dealing with loneliness at university. *New Vistas*, 7(1), 31–36. <https://doi.org/10.36828/newvistas.23>.
- Cacioppo, J., Cacioppo, S., & Boomsma, D. (2014). Evolutionary mechanisms for loneliness. *Cognition & Emotion*, 28, 21–3. <https://doi.org/10.1080/02699931.2013.837379>.
- Cacioppo, J. T., & Cacioppo, S. (2018). Loneliness in the modern age: An evolutionary theory of loneliness (ETL). In *Advances in experimental social psychology* (pp. 127–197, Vol. 58). Academic Press. <https://doi.org/10.1016/bs.aesp.2018.03.003>.
- Campagne, D. (2019). Stress and perceived social isolation (loneliness). *Archives of Gerontology and Geriatrics*, 82, 192–199. <https://doi.org/10.1016/j.archger.2019.02.007>.
- Çerkez, Y., & Kara, D. (2017). Investigating the relationship between university students' use of social media, loneliness and depression. *European Journal of Education Studies*, 3(2), 115–129. <https://doi.org/10.46827/ejes.v0i0.456>.
- Doktorová, D., & El Mghari, S. (2024). The paradox of social media: Loneliness and fear of missing out in university students. *Media & Marketing Identity*, 1, 86–97. <https://doi.org/10.34135/mmidentity-2024-09>.
- Eraslan Çapan, B., & Sarıçalı, M. (2016). The role of social and emotional loneliness in problematic Facebook use. *Inonu University Journal of the Faculty of Education*, 17(3), 53–66. <https://doi.org/10.17679/iuefd.17306122>.
- Et, E. (2019). *Sosyal medyanın üniversite öğrencilerinin içe kapanıklık ve yalnızlık düzeylerine etkisinin incelenmesi* [Yüksek lisans tezi]. Ufuk Üniversitesi. <https://kutuphane.ufuk.edu.tr/opac/details?id=30463>.
- Ghanayem, L., Shannon, H., Khodr, L., McQuaid, R., & Hellemans, K. (2024). Lonely and scrolling during the COVID-19 pandemic: Understanding the problematic social media use and

- mental health link among university students. *Frontiers in Psychiatry*, 15. <https://doi.org/10.3389/fpsyt.2024.1247807>.
- Guo, H. (2018). *Linking loneliness and use of social media* [Master's thesis]. University of Helsinki. <http://hdl.handle.net/10138/235933>.
- Halston, A., Iwamoto, D., Junker, M., & Chun, H. (2019). Social media and loneliness. *International Journal of Psychological Studies*, 11(3), 27. <https://doi.org/10.5539/ijps.v11n3p27>.
- Hong, J., Nakamura, J., Berkman, L., Chen, F., Shiba, K., Chen, Y., Kim, E., & VanderWeele, T. (2023). Are loneliness and social isolation equal threats to health and well-being? An outcome-wide longitudinal approach. *SSM - Population Health*, 23, 101459. <https://doi.org/10.1016/j.ssmph.2023.101459>.
- Hysing, M., Petrie, K., Bøe, T., Lønning, K., & Sivertsen, B. (2020). Only the lonely: A study of loneliness among university students in Norway. *Clinical Psychology in Europe*, 2(1), e2781. <https://doi.org/10.32872/cpe.v2i1.2781>.
- Islam, M. A., & Kumar, B. (2019). The relationship between social network, social media use, loneliness and academic performance: A study among university students in Bangladesh. *World of Media. Journal of Russian Media and Journalism Studies*, (4), 25–47. <https://doi.org/10.30547/worldofmedia.4.2019.2>.
- Jean Tsang, S. (2019). Cognitive discrepancy, dissonance, and selective exposure. *Media Psychology*, 22(3), 394–417. <https://doi.org/10.1080/15213269.2017.1282873>.
- Käll, A., Shafraan, R., Lindegaard, T., Bennett, S., Cooper, Z., Coughtrey, A., & Andersson, G. (2020). A common elements approach to the development of a modular cognitive behavioral theory for chronic loneliness. *Journal of Consulting and Clinical Psychology*, 88(3), 269–282. <https://doi.org/10.1037/ccp0000454>.
- Karakuş, M., & Tarhan, A. (2023). Yükseköğretim öğrencilerinin sosyal medya kullanımları ve yalnızlık düzeyleri arasındaki ilişki. *İletişim ve Toplum Araştırmaları Dergisi*, 3(2), 209–232. <https://doi.org/10.59534/jcss.1300658>.
- Kaya, O., Kaya, Ş., & Soydan, M. E. (2023). Üniversite öğrencileri örnekleminde; okul tükenmişliği ile yalnızlık algısı arasında sosyal medya bağımlılığının aracı rolü. *Uluslararası Sosyal Bilimler ve Eğitim Dergisi*, 5(8), 317–336.
- Lam, J., Murray, E., Yu, K., Ramsey, M., Nguyen, T., Mishra, J., Martis, B., Thomas, M., & Lee, E. (2021). Neurobiology of loneliness: A systematic review. *Neuropsychopharmacology*, 46, 1873–1887. <https://doi.org/10.1038/s41386-021-01058-7>.
- Lee, Y., Lay, J., Pauly, T., Graf, P., & Hoppmann, C. (2022). The differential roles of chronic and transient loneliness in daily prosocial behavior. *Psychology and Aging*. <https://doi.org/10.1037/pag0000681>.
- Lim, M., Eres, R., & Vasan, S. (2020). Understanding loneliness in the twenty-first century: An update on correlates, risk factors, and potential solutions. *Social Psychiatry and Psychiatric Epidemiology*, 55, 793–810. <https://doi.org/10.1007/s00127-020-01889-7>.
- Luo, Q., & Shao, R. (2023). The positive and negative emotion functions related to loneliness: A systematic review of behavioural and neuroimaging studies. *Psychoradiology*, 3(1). <https://doi.org/10.1093/psyrad/kkad029>.
- Mann, F., Wang, J., Pearce, E., Schlieff, M., Lloyd-Evans, B., Ikhtabi, S., & Johnson, S. (2022). Loneliness and the onset of new mental health problems in the general population. *Social Psychiatry and Psychiatric Epidemiology*, 57, 2161–2178. <https://doi.org/10.1007/s00127-022-02261-7>.
- Martín-María, N., Caballero, F., Lara, E., Domènech-Abella, J., Haro, J., Olaya, B., Ayuso-Mateos, J., & Miret, M. (2020). Effects of transient and chronic loneliness on major depression in older adults: A longitudinal study. *International Journal of Geriatric Psychiatry*, 36, 76–85. <https://doi.org/10.1002/gps.5397>.
- McCarthy, J., Erdogan, B., Bauer, T., Kudret, S., & Campion, E. (2025). All the lonely people: An integrated review and research agenda on work and loneliness. *Journal of Management*. <https://doi.org/10.1177/01492063241313320>.

- Mohamed, N. N. I., Ma'rof, A. A., & Sulaiman, A. H. (2023). The relationship between the use of social networking sites, perceived social support and spirituality on loneliness among university students in Klang Valley, Malaysia. *International Journal of Academic Research in Business & Social Sciences*, 13(17), 2311–2332. <https://doi.org/10.6007/IJARBS/v13-i17/19823>.
- Motta, V. (2021). Key concept: Loneliness. *Philosophy, Psychiatry, & Psychology*, 28, 71–81. <https://doi.org/10.1353/ppp.2021.0012>.
- Nazzal, F., Cruz, O., & Neto, F. (2020). Psychological predictors of loneliness among Palestinian university students in the West Bank. *Transcultural Psychiatry*, 57, 688–697. <https://doi.org/10.1177/1363461519857298>.
- Newall, N., & Menec, V. (2019). Loneliness and social isolation of older adults: Why it is important to examine these social aspects together. *Journal of Social and Personal Relationships*, 36, 925–939. <https://doi.org/10.1177/0265407517749045>.
- Nottage, M. K., Oei, N. Y. L., Wolters, N., Klein, A., Van der Heijde, C. M., Vonk, P., Wiers, R. W., & Koelen, J. (2022). Loneliness mediates the association between insecure attachment and mental health among university students. *Personality and Individual Differences*, 185, 111233. <https://doi.org/10.1016/j.paid.2021.111233>.
- O'Brien, O., Sumich, A., Baguley, T., & Kuss, D. (2023). A partial correlation network indicates links between well-being, loneliness, FOMO and problematic internet use in university students. *Behaviour & Information Technology*, 42, 2717–2734. <https://doi.org/10.1080/0144929X.2022.2142845>.
- Ousman, Y., & Nazir, T. (2023). Loneliness among university students as a growing concern. *Journal of Family, Counseling and Education*. <https://doi.org/10.32568/jfce.1312556>.
- Ozsaker, M., Muslu, G. K., Kahraman, A., Beytut, D., Yardimci, F., & Basbakkal, Z. (2015). A study on the effects of loneliness, depression and perceived social support on problematic internet use among university students. *The Anthropologist*, 19(2), 533–542. <https://doi.org/10.1080/09720073.2015.11891688>.
- Phillips, R., Seaborne, K., Goldsmith, A., Curtis, N., Davies, A., Haynes, W., McEnroe, R., Murphy, N., O'Neill, L., Pacey, C., Walker, E., & Wordley, E. (2022). Student loneliness through the pandemic: How, why and where? *The Geographical Journal*, 188, 277–293. <https://doi.org/10.1111/geoj.12438>.
- Quadt, L., Esposito, G., Critchley, H., & Garfinkel, S. (2020). Brain-body interactions underlying the association of loneliness with mental and physical health. *Neuroscience & Biobehavioral Reviews*, 116, 283–300. <https://doi.org/10.1016/j.neubiorev.2020.06.015>.
- Rai, K., & Gill, G. (2016). Loneliness in relation to social networking site usage among university students. *Indian Journal of Health and Well-being*, 7, 518–521.
- Ramadhan, D. A. C., & Maryam, E. W. (2024). Intensity of social media use and loneliness in university students. *ISPsy 2023: Proceedings of the 6th International Seminar on Psychology*, 132. <https://doi.org/10.4108/eai.18-7-2023.2343808>.
- Roberts, T., & Krueger, J. (2020). Loneliness and the emotional experience of absence. *The Southern Journal of Philosophy*. <https://doi.org/10.1111/sjp.12387>.
- Rogowska, A. M., & Libera, P. (2022). Life satisfaction and Instagram addiction among university students during the COVID-19 pandemic: The bidirectional mediating role of loneliness. *International Journal of Environmental Research and Public Health*, 19(14), 8414. <https://doi.org/10.3390/ijerph19148414>.
- Sharma, B. (2021). Uncovering the ties between social media and loneliness. *International Journal of Indian Psychology*, 9(2), 1184–1191. <https://doi.org/10.25215/0902.124>.
- Shen, C., Rolls, E., Cheng, W., Kang, J., Dong, G., Xie, C., Zhao, X., Sahakian, B., & Feng, J. (2022). Associations of social isolation and loneliness with later dementia. *Neurology*, 99, e164–e175. <https://doi.org/10.1212/WNL.0000000000000583>.
- Simegn, W., Sisay, G., Seid, A., & Dagne, H. (2023). Loneliness and its associated factors among university students during late stage of COVID-19 pandemic: An online cross-sectional study. *PLOS ONE*, 18. <https://doi.org/10.1371/journal.pone.0287365>.

- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2019.07.039>.
- Sobirjonova, M. (2024). Psychological, social, and existential aspects of the phenomenon of loneliness. *Actual Problems of Humanities and Social Sciences*, 4(12), 328–331. <https://doi.org/10.47390/SPR1342V4I12Y2024N51>.
- Solmi, M., Veronese, N., Galvano, D., Favaro, A., Ostinelli, E., Noventa, V., Favaretto, E., Tudor, F., Finessi, M., Shin, J., Smith, L., Koyanagi, A., Cester, A., Bolzetta, F., Cotroneo, A., Maggi, S., Demurtas, J., De Leo, D., & Trabucchi, M. (2020). Factors associated with loneliness: An umbrella review of observational studies. *Journal of Affective Disorders*, 271, 131–138. <https://doi.org/10.1016/j.jad.2020.03.075>.
- Sukhera, J. (2022). Narrative reviews: Flexible, rigorous, and practical. *Journal of Graduate Medical Education*, 14(4), 414–417. <https://doi.org/10.4300/jgme-d-22-00480.1>.
- Tiryaki, S. (2018). Yalnızlık ve benlik sunumu çerçevesinde sosyal medya kullanımı. *The Journal of Social Sciences / Sosyal Bilimler Dergisi*, 5(28), 154–165. <https://doi.org/10.16990/SOBIDER.4264>.
- Uyaroğlu, A., Ergin, E., Tosun, A., & Erdem, Ö. (2022). A cross-sectional study of social media addiction and social and emotional loneliness in university students in Turkey. *Perspectives in Psychiatric Care*. <https://doi.org/10.1111/ppc.13056>.
- Üzgü, M. A., Bozgüney, R., Can, B., Ozlu, M., Akat, A., Güneş, F., & Çalık, F. (2023). Üniversite öğrencilerinin dijital bağımlılık ve yalnızlık düzeylerinin incelenmesi. *Düzce Üniversitesi Spor Bilimleri Dergisi*, 3(1), 75–82.
- Van Den Bulck, C., Van Emmerik, A., Blanken, T., Kamphuis, J., & Dijk, C. (2025). Mapping vulnerability factors of chronic emotional and social loneliness: A network analysis. *Journal of Affective Disorders*. <https://doi.org/10.1016/j.jad.2025.02.105>.
- Van Tonder, J., Jordaan, J., & Esterhuyse, K. (2023). Self-esteem, interpersonal communication competence, and media and technology usage as predictors of loneliness among university students. *SAGE Open*, 13. <https://doi.org/10.1177/21582440221148379>.
- Vitale, E., & Smith, A. (2022). Neurobiology of loneliness, isolation, and loss: Integrating human and animal perspectives. *Frontiers in Behavioral Neuroscience*, 16. <https://doi.org/10.3389/fnbeh.2022.846315>.
- Wang, F., Gao, Y., Han, Z., Yu, Y., Long, Z., Jiang, X., Wu, Y., Pei, B., Cao, Y., Ye, J., Wang, M., & Zhao, Y. (2023). A systematic review and meta-analysis of 90 cohort studies of social isolation, loneliness and mortality. *Nature Human Behaviour*, 7, 1307–1319. <https://doi.org/10.1038/s41562-023-01617-6>.
- Wang, X., & Cheng, Z. (2020). Cross-sectional studies: Strengths, weaknesses, and recommendations. *Chest*, 158(1S), S65–S71. <https://doi.org/10.1016/j.chest.2020.03.012>.
- Wenig, V., Heumann, E., Stock, C., Busse, H., Negash, S., Pischke, C., & Heinrichs, K. (2023). Associations of loneliness with mental health and with social and physical activity among university students in Germany: Results of the COVID-19 German student well-being study (C19 GSWS). *Frontiers in Public Health*, 11. <https://doi.org/10.3389/fpubh.2023.1284460>.
- Wolska, K., & Creaven, A. (2022). Associations between transient and chronic loneliness, and depression, in the understanding society study. *The British Journal of Clinical Psychology*. <https://doi.org/10.1111/bjc.12397>.
- Wolters, N., Mobach, L., Wuthrich, V., Vonk, P., Van Der Heijde, C., Wiers, R., Rapee, R., & Klein, A. (2023). Emotional and social loneliness and their unique links with social isolation, depression and anxiety. *Journal of Affective Disorders*. <https://doi.org/10.1016/j.jad.2023.02.096>.
- Wright, R. R., Hardy, K., Shuai, S. S., Egli, M., Mullins, R., & Martin, S. (2018). Loneliness and social media use among religious latter-day saint college students: An exploratory study. *Journal of Technology in Behavioral Science*, 3, 12–25. <https://doi.org/10.1007/s41347-017-0033-3>.
- Wu, P., Feng, R., & Zhang, J. (2024). The relationship between loneliness and problematic social media usage in Chinese university students: A longitudinal study. *BMC Psychology*, 12. <https://doi.org/10.1186/s40359-023-01498-4>.

- Ye, S., & Ho, K. (2024). Would you be healthier if you had more social capital? Focusing on university students' social media use in Japan. *BMC Psychology*, 12. <https://doi.org/10.1186/s40359-024-02278-4>.
- Zahedi, H., Sahebiagh, M., & Sarbakhsh, P. (2022). The magnitude of loneliness and associated risk factors among university students: A cross-sectional study. *Iranian Journal of Psychiatry*, 17, 411–417. <https://doi.org/10.18502/ijps.v17i4.10690>.